

without varying from the spirit of the present invention. Rather the scope of the present invention is defined only by the following claims:

## CLAIMS

I claim:

1. An imaging system comprising:
  - a swallowable capsule comprising:
    - an ultra-wideband radar sensor system for imaging objects; and
    - controlling circuitry means that operatively regulates said imaging system; and
    - a transceiver to transmit imaging signals of said ultra-wideband radar sensor system and to receive controlling signals; and
    - a power supply for said imaging system.
2. A system according to claim 1 and including a miniature communications port wherein the electrical circuitry within said capsule is connected through the capsule wall to electrical contacts located on the outside surface of the capsule wall.
3. A system according to claim 1, and alternative claim 2, and including a reception system, operatively connected to said imaging system, which receives said transmitted imaging signals comprising:
  - a plurality of antennae; and
  - a power supply; and
  - storage means; and
  - controlling circuitry means operatively connecting the parts of said reception system.
4. A system according to claim 3 and including a transceiver component for wireless

- communication with other systems.
5. A system according to claim 3 and including a communications port for direct wire communication with other systems.
6. A system according to claim 3 and including:
- a communications port for direct wire communication with other systems; and
  - a transceiver component for wireless communication with other systems.
7. A system according to claim 3, and alternative claims 4 and 5 and 6, and including a programmable computer system operatively connected to said reception system and said imaging system, which processes said transmitted imaging signals saved in said storage means and controls said imaging system comprising:
- a computer system; and
  - software programs which process said imaging signal data into various presentation formats; and
  - software programs to issue instructions to said controlling circuitry means of said imaging system; and
  - input means; and
  - transmission means operatively connecting said computer system input means with said storage means of said reception system.
8. A system according to claim 7 and including a transceiver component for wireless communications with said transceiver component of said capsule and said transceiver component of said reception system.
9. A system according to claim 7 and including a communications port for direct wire connections with said miniature communications port of said capsule and said

communications port of said reception system.

10.A system according to claim 7 and including:

a transceiver component for wireless communications with other systems; and

a communications port for direct wire connections to other systems.

11.A system according to claim 1 and alternative claim 2, wherein the electromagnetic wave

emitter of said ultra-wideband radar sensor system is an ultraviolet frequency light emitting

diode and the electromagnetic wave receiver is an ultraviolet frequency sensitive detector and

the shell of said capsule is transparent to ultraviolet waves.

12.A system according to claim 1 and alternative claim 2, wherein the electromagnetic wave

emitter of said ultra-wideband radar sensor system is an infrared frequency light emitting

diode and the electromagnetic wave receiver is an infrared frequency sensitive detector and

the shell of said capsule is transparent to infrared waves.